DOCUMENT RESUME

ED 069 252 HE 003 579

TITLE	Final Report and Recommendations on Regional Computing Centre Development.
INSTITUTION	Committee of Presidents of Universities of Ontario, Toronto.
PUB DATE	Mar 69
NOTE	9p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Computer Oriented Programs; *Computer Programs; *Computer Storage Devices; *Higher Education; *International Education; *Regional Planning

ABSTRACT

The Draft Report of the Joint Ad Hoc Subcommittee on Regional Computing Centres of the Committee of Presidents of Universities of Ontario made a tentative recommendation that a regional computer center should be developed for the use of Ontario universities. However, on further investigation it was found that such a computer center would be financially unfeasible at the present time. Thus, the subcommittee recommends that the Ontario universities establish a full-time Computing Coordination Group to study alternate computer possibilities, such as the use of commercial facilities, and to ensure that information relating to computer technology is distributed to all Ontario universities. (HS)

ED 069252

FINAL REPORT AND RECOMMENDATIONS

ON

REGIONAL COMPUTING CENTRE DEVELOPMENT

to the

Committee on University Affairs

and the

Committee of Presidents of Universities of Ontario

by the

Joint Ad Hoc Subcommittee on Regional Computing Centres

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INTRODUCTION

This document contains the final report and recommendations of the Joint Ad Hoc Subcommittee on Regional Computing Centres. The previously issued (February, 1969) "Draft Report for Comment on Regional Computing Centre Development" described the terms of reference and the work of the Subcommittee in detail and included Appendices containing the reports of the consultants, as well as other relevant information. Because that Report was distributed widely (over 300 copies were circulated), it is not considered to be necessary now to replicate its contents. It should, of course, be read as a preamble to the present final report and recommendations.

Following the distribution of the Draft Report three hearings were held (in Ottawa, London and Toronto on February 27, March 3 and 4) to determine the response to the report and to discuss the tentative recommendations with interested groups. These hearings were well attended and the members of the Joint Ad Hoc Subcommittee were impressed with the many valuable suggestions and observations made by those who participated. The findings of the Subcommittee from these hearings are as follows:

1. There is no prospect of sufficient support for the proposed interim regional computing centre, based on a machine of the size of the IBM 360-65, to make such a centre practicable either at present or in the near future. Such an installation could not be justified economically in the light of existing facilities and alternative arrangements open to the universities, and the type of services proposed were too restrictive in nature. The small universities, even jointly, would be unable to muster sufficient student use to cover a significant portion of the operating cost of such an interim regional computing centre. The larger universities, whose requirements for student work are presently met, feel that the proposed interim facility would not be sufficiently powerful to attract research computing.

2. There is a general awareness that the aggregate purchasing power of the universities could lead to the realization of substantial economies of scale in purchasing computing. It is clear that committed co-operative action will be required to achieve such economies.

3. Increments in the capacity of on-campus computing facilities come in discrete steps, and are preceded by considerable planning. Hence, at any point in time, some universities would have recently saturated their computing requirements while others would have unfulfilled needs. Therefore, sufficient lead time must be provided prior to co-operative action to enable universities to plan both for intervening development and for the transfer of budget funds to the co-operative effort. The services to be offered, their cost and availability, must be spelled out in sufficient detail so that the universities can make firm plans for the provision of complimentary services where necessary.

4. The pace of development in computer technology is rapid. There are now a growing number of means through which Ontario universities may acquire computing services quite beyond the anticipations of twelve or eighteen months ago. While it is clear, as noted above, that the aggregate purchasing power of the universities would enable them to realize substantial economies in purchasing computing, it is not clear at this time which of the several ways the required computing services could be provided, will be best. Amongst the alternatives that would have to be considered are: establishing a dedicated universities' regional computing centre (owned or leased), purchasing computing time from a large, single commercial source, and purchasing computing in different modes from a variety of commercial suppliers. The hearings revealed that time-sharing, in particular, is of great interest to many universities, and special attention will have to be given on methods for bringing this mode of computing effectively into the universities.

5. It has become apparent that the work of a <u>full-time</u> staff is needed to carry out further studies and to act on behalf of the universities to achieve the economies available through co-operation.

In the light of our earlier work and of these findings, we make the following recommendations to the Committee of Presidents of Universities of Ontario and to the Committee on University Affairs:

1. That the Ontario universities immediately establish a full-time Computing Co-ordination Group (CCG) whose objectives would be:

   (a) to enable universities to exploit economies of scale through the aggregation of their purchasing powers for computing, and to explore modes of computing appropriate to the universities' needs. In particular, the merits of establishing a large co-operative computing facility will be examined and specific trial investigations involving available commercial services will be undertaken;

   (b) to ensure that information relating to computing technologies is distributed to all Ontario universities, so that decisions can be made on the basis of the most complete information.

   The terms of reference and the proposed initial budget for the Computing Co-ordination Group are attached.

2. That there be no immediate establishment of a central computing facility as had been tentatively proposed in the Draft Report of the Subcommittee. That, instead, multilateral and other arrangements be made by the universities so as to leave maximum opportunity for future flexibility.

3. That the universities make a firm commitment of financial support for the Computing Co-ordination Group and for the joint purchase and distribution of computing services, at a level of two dollars per BIU in fiscal 1969-70, rising to at least six dollars per BIU in 1970-72, and to at least twelve dollars per BIU in 1972-73.

4. That there be established a Management Board and a Technical Committee to be responsible for the policy and activities of the Computing Co-ordination Group as follows:

   (a) The Management Board will be responsible for policy and for recommending CCG budgets to the CPUO for approval. The Board should

consist of one member from each university, plus one observer each from the Committee on University Affairs and the Department of University Affairs. It is suggested that no member of the Management Board have a direct responsibility for the provision of computing services at his university. Recommendations regarding joint action on computing facilities, determination of budgets and other major policy questions will be determined on a majority vote of the Committee of Presidents, or its successor.

(b) The Technical Committee be composed of one member from each university, each member to have a direct responsibility for some aspect of the provision of computing services at his university. This committee is to serve in an advisory capacity to the CCG on technical matters, and as a liaison group with the computing facilities of the universities.

5. That, subject to agreement by the Committee of Presidents of Universities of Ontario and the Committee on University Affairs, on the points above, the fund of $5,200,000 earmarked for computers in fiscal 1969-70 should be distributed to the universities, in proportion to their BIU entitlements. The sums allocated should be used for the provision of computing services, and for support of the CCG as outlined above.

OBJECTIVES AND TERMS OF REFERENCE OF THE COMPUTING CO-ORDINATION GROUP

The objectives of this group would be to:

1. Enable the member universities to exploit the economies of scale which can be derived from their aggregate purchasing power for computing services, within the policy guidelines set out by the Management Board, in such a way as to negate the effects of geography, as far as practicable.

2. Ensure that member universities are informed about developments in computing technology of benefit and interest to them.

3. Explore and recommend co-operative action on computers with Colleges of Applied Arts and Technology, and with other jurisdictions, especially in the public sector, as may appear appropriate.

The terms of reference of the Computing Co-ordination Group would be to:

1. Establish an inventory of computing services and equipment currently available in member universities together with an estimate of current and forecasted computing needs.

2. Identify areas where these needs can advantageously be met by a co-operative effort, and to recommend courses of action to the Management Board.

3. Establish means of communicating information on current operations and developments in the computing field, and related matters of interest to the universities, through the Technical Committee, or directly.

4. Supervise negotiations with suppliers of computing hardware, software and services.

5. Develop criteria for evaluating proposals and assessing experiments in the use of computing services.

6. Undertake experimentation in the provision of computing services of various kinds to individual universities. In such experiments there should be prior approval by the Management Board, cost sharing between the Computing Co-ordination Group and the university concerned, and explicit undertakings for control, monitoring, evaluation and reporting.

The Computing Co-ordination Group should not itself engage in the development of software or hardware. Where special development is required, this should be contracted to commercial groups and/or to universities as may be appropriate for the work required.

TERMS OF REFERENCE OF THE MANAGEMENT BOARD

The objectives of the Management Board would be to act as a board of direction for the Computing Co-ordination Group in carrying out its objectives as previously outlined.

The terms of reference of the Management Board are proposed as follows:

It should:

1. establish its own by-laws and rules of procedure, subject to approval by the Committee of Presidents of Universities of Ontario;

2. elect its own chairman and executive officers, under the terms of its own by-laws and rules of procedure;

3. be responsible for the appointment of the manager of the Computing Co-ordination Group, for establishing his terms of reference, and for regular surveillance and review of his performance;

4. recommend the assessment to the member universities;

5. approve the annual budget of the CCG, and any expenditures made by the CCG in excess of $20,000 for any one item, or for any contract with any one supplier in excess of $10,000 in any one year;

6. approve guidelines, criteria, and procedures to be used in evaluating different types of computing services;

7. approve and support the plans of the CCG, or failing this, guide the CCG to better alternatives;

8. determine the rules of procedure, membership, budget, and chairman of the Technical Committee;

9. report to the CPUO at least once a year.

TERMS OF REFERENCE OF THE TECHNICAL COMMITTEE

The objectives of the Technical Committee are to assist the Computing Co-ordination Group and the Management Board in the pursuit of the objectives previously identified.

The specific terms of reference of the Technical Committee are proposed as follows:

1. To advise the manager of the CCG on technical matters.

2. Review technical content of proposed policies, courses of action, criteria, procedures, and to suggest improvements to the manager, and advise him of implications at member universities.

3. Identify needs for computing services and recommend types of services to be evaluated by the CCG.

4. Co-ordinate activities between the member universities and the CCG.

5. Report to the Management Board as required.

COMPUTING CO-ORDINATION GROUP

PROPOSED BUDGET AND STAFF

1 Manager) 2 Systems Analysts) 2 Programmers) 1 Telecommunications Specialist) 1 Librarian) 1 Secretary)	$115,000.00
Space and Accommodation	18,000.00
Travel	10,000.00
Legal and Accounting	5,000.00
Office Furnishings	10,000.00
Office Supplies	2,000.00
Budgets for Co-operative Projects within the first year of operation	90,000.00
Supplementary budget for provision of services to emerging universities	50,000.00
TOTAL	$300,000.00